SILCOTUB SA
Quality and Service
BD. MIHAI VITEAZU NO.93
4700 ZALAU
ROMANIA

MILL TEST CERTIFICATE

ACCORDING TO EN 10204/3.1.B

COPY

DATE	ORDER NO.	No.	PAGE
11.02.2002	ORDER NO. PO 187030	1	1 OF 1

BUYER :	SPECIFICATION	MATERIAL	
DUFERCO SA VIA BAGAFFI 8 6900 LUGANO SWITZERLAND	ASTM A 106/1999; ASTM A 53/1999;	GRADE B	WAGGON NO. : SWAP BODY NO. : TRUCK NO. :

No.	SIZE	HEAT NUMBER	NUMBER OF PIECES	NUMBER OF PIECES	LENGTH IN METERS	WEIGHT IN MT	NUMBER OF BUNDLES	ITEM	LOT
1	1" X 0.133 (33.40 x 3.38 mm)	33354	455	1312	7997.952	19.996	15	1	
		99951	857						

DESCRIPTION

199.714MT OF SEAMLESS STEEL TUBING ORDER CONFIRMATION 187030
[DUFERCO REF.NO. 187030]

PRODUCT ANALYSES

No.	HEAT	Sample no.	C	Mn	Si	P	S	Cr	Ni	Mo	Cu	V		Flattening	Bending	Flaring	Hardness	Hidrostatic PSI	NONDESTRUCTIVE TEST
			CHEMICAL COMPOSITION %											OTHER TESTS					
1	33354	37889	0.166	0.535	0.249	0.010	0.010	0.139	0.115	0.008	0.220	0.003		-	GOOD	-	-	2500	-
	33354	37890	0.168	0.538	0.249	0.010	0.010	0.140	0.114	0.008	0.219	0.003							
2	99951	37893	0.151	0.594	0.294	0.012	0.020	0.197	0.154	0.024	0.248	0.003		-	GOOD	-	-	2500	-
	99951	37894	0.153	0.593	0.296	0.012	0.020	0.197	0.155	0.024	0.247	0.003							
3	99951	37895	0.149	0.593	0.288	0.014	0.020	0.197	0.154	0.024	0.247	0.003		-	GOOD	-	-	2500	-
	99951	37896	0.149	0.592	0.288	0.014	0.020	0.197	0.154	0.024	0.247	0.003							

MECHANICAL PROPERTIES

TEST SPECIMEN						TENSION					TRACTION			CHARPY V-NOTCH				TEMP.	SHEAR
						Tensile Strenght			Yield Strenght			Elongation							
No.	HEAT	Sample no.	Dimensions inch x inch	Section inch²	Length inch	Required Min.	Required Max.	Result PSI	Required Min.	Required Max.	Result PSI	Required Min.	Result %	1	2	3	Average	°F	%
1	33354	37889	1.32 x 0.14	0.51	2.00	60000		66986	35000		49911	30.00	36.20						
2	99951	37893	1.32 x 0.14	0.52	2.00	60000		69683	35000		48475	30.00	33.50						
3	99951	37895	1.32 x 0.14	0.51	2.00	60000		69922	35000		48192	30.00	33.40						

I CERTIFY THAT THE MATERIAL HEREINDESCRIBED HAS BEEN MANUFACTURED WITH THE ORDERED SPECIFICATION AND THAT THE REST INFORMATION IS CORRECT AND CONTAINED IN THE RECORDS OF THE COMPANY

SIGNATURE

QUALITY DEPT. CHIEF
Ing. TIBERIU ERDEI

SILCOTUB S.A.
CONTROL TEHNIC
Zalau - Romania